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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,062	12/29/2003	Toni Ostergard	915-001.023	7370

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EXAMINER

OSORIO, RICARDO

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/749,062

Applicant(s)

OSTERGARD, TONI

Examiner

RICARDO L. OSORIO

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/19/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the restriction requirement in the reply filed on 1/16/2007 is acknowledged. The traversal is on the ground(s) that as argued in the REMARKS, page 8, the principle of the claimed invention is equally applicable whether the electrically active areas cooperate as part of a touch pad, or as part of the key pad. This is found persuasive because applicant is admitting that species related to the key pad are obvious variances to the species of the claims related to the touch pad. Therefore, the claims related to the key pad species, 5-7 are now rejoined with the elected claims and will be examined.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hamada (6,501,528).

Regarding claim 1, Hamada teaches of an electromechanical input device (See Fig. 2A), comprising: a first layer of conductive or resistive material (Fig. 5, character 61), a second layer of conductive or resistive material, which second layer at least partly overlaps the first layer so that the overlapping parts of the first and second layers together are responsive to touching or pressing to produce an electric input signal to the portable electronic device (Fig. 5, character 43'), a dielectric support layer for the first layer (Fig. 5, character 41', front area), and a dielectric support layer for the second layer (Fig. 5, character 41', rear area); wherein at least a

Art Unit: 2629

part of the dielectric support layer for the first layer continues passed the first layer and is bent back to act as the dielectric support layer for the second layer (col. 12, lines 10-13).

As to claim 2, Hamada teaches of the dielectric support layer for the first layer and the dielectric support layer for the second layer are portions of a flexible printed circuit board (col. 10, line 8) that also comprises conductive tracks for realizing electrical connections between components attached to said flexible printed circuit board (col. 8, lines 15-17).

As to claim 3, Hamada teaches of the overlapping parts of the first and second layers constitute a touch pad (col. 7, line 36).

As to claim 4, Hamada teaches of an additional layer between the first and second layers, which additional layer acts as resilient isolation means between the overlapping parts of the first and second layers (Fig. 5, character 40').

As to claim 8, further, Hamada teaches of other layers that are conductive or resistive and supported by a dielectric layer that is of the same piece of material as the dielectric support layer of the first and second layers (Fig. 5, characters 60, 42', and 64).

As to claim 9, Hamada, further, teaches of a portion of the flexible printed circuit board separates the first layer from the second layer (Fig. 5, character 55'), thus allowing the flexible printed circuit board to be bent around an imaginary axis crossing said portion of the flexible printed circuit board (col. 12, lines 10-13), so that after bending the second layer comes to at least partly overlap the first layer, and the overlapping parts of the first and second layers together are then responsive to touching or pressing to produce an electric input signal to the portable electronic device (col. 8, lines 32-54).

As to claim 10, Hamada, further, teaches of the flexible printed circuit board also comprises electronic components attached thereto, and the conductive tracks connect at least one of said electronic components to the first and second layers for allowing electric input signals produced in the first and second layers to propagate to at least one of said electronic components (col. 9, lines 3-10).

As to claim 11, Hamada teaches of the first and second layers are located on a same surface of the flexible printed circuit board, so that bending the flexible printed circuit board 180 degrees around an imaginary axis crossing said portion of the flexible printed circuit board brings the first and second layers against each other with no part of the flexible printed circuit board therebetween (See Fig. 5, and col. 8, lines 32-54, and col. 12, lines 10-13).

As to claim 12, further, Hamada teaches of an additional layer on top of at least one of the first and second layers, so that bending the flexible printed circuit board 180 degrees around an imaginary axis crossing said portion of the flexible printed circuit board brings the first and second layers against each other with said additional layer therebetween (See Fig. 5, and col. 8, lines 32-54, and col. 12, lines 10-13).

Claim Rejections - 35 USC § 103

4. Claims 5-7, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada (see above).

Regarding claims 5-7, applicant admits in the REMARKS the following:

“Please further note that the species are stated by the Office as being independent or distinct because they are directed to different embodiments and/or different devices; i.e., touch pad or key pad. However, it should be noted that a feature of the present invention is that electrically active areas on at least two distinct locations on the surface of a flex is disclosed and that the flex is bent so as to bring these two locations close enough together so that the electrically active areas can cooperate in producing an input signal as a response to a user's mechanical action. As such, this principle is equally applicable whether the electrically active areas cooperate as part of a touch pad, such as shown in Figure 3, or as part of a key pad, such as shown in Figure 8. Consequently, to the extent that the restriction of the species is premised on the ground that a touch pad and key pad are different devices, the restriction is respectfully traversed”.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the keypad rejected by the same reasons as the touchpad, as taught by applicant in the remarks, in the device of Hamada because the touch pad and the key pad are obvious variations of the feature of the invention.

As to claim 14, Hamada teaches s of a display (see character 31).

However, Hamada does not specifically teach of an engine module of a portable telephone device, a microphone and a loudspeaker.

Although not specifically taught, it is well known to someone of ordinary skill in the art to use a touch pad, such as Hamada's in a portable telephone, a camera, a portable display, or a PC to provide touch input control.

As to claim 15, further, see claims 9, and 14.

As to claim 16, further, Hamada does not specifically teach of a battery pack having a planar side surface, which battery pack is located with its planar side surface parallel to the first and second surfaces on an opposite side of the flexible printed circuit board than the first and second surfaces, so that said planar side surface of the battery pack acts as a mechanical support for the flexible printed circuit board at the location of the overlapping parts of the first and second layers.

It is well known in the art of portable telephones that the touch pad is on the front planar surface and the battery pack is on the back planar surface and provides mechanical support to the flexible PCB.

Art Unit: 2629

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the battery pack behind and supporting the flexible PCB because it is well known in the art of cell phones, or portable telephones to have the battery pack on the back being a solid portion to provide support to the flexible PCB in front of it. To this support and locational relationship between the battery pack and the touch pad, examiner takes official notice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is 571-272-7676. The examiner can normally be reached on Monday through Thursday from 7:00 A.M. to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala whose telephone number is 571-272-7681.

Any response to this action should be mailed to:

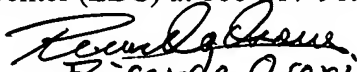
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or faxed to: 571-273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window at the Randolph Building, 401, Dulany Street, Alexandria, VA 22314.

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Ricardo Osorio
PRIMARY EXAMINER
Technology Division: 2629

RLO